

Appl. No 10/615,651

Amdt dated May 24, 2006

Reply to Office Action of February 24, 2006

### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of Claims

1. (Currently Amended) A method of forming a catheter, comprising:

providing a braid layer having a distal end and a proximal end, an inner lubricious liner positioned within the braid layer;

securing a first polymer segment over the braid layer, the first polymer segment being positioned proximal of the distal end of the braid layer, the first polymer segment having a distal end and a proximal end;

cutting through the braid layer and the inner lubricious liner at a cutting position proximate the distal end of the first polymer segment and removing a portion of the braid layer that extends distally of the cutting position; and

subsequent to cutting through the braid layer and the inner lubricious liner, securing a second polymer segment over the braid layer, the second polymer segment extending over the first polymer segment and extending distally of the cutting position.

2. (Original) The method of claim 1, wherein the first polymer segment has a melting point that is at least about 10° F above a melting point of the second polymer segment.

3. (Original) The method of claim 1, wherein securing the first polymer segment comprises positioning a heat shrink tube over the first polymer segment and applying sufficient heat and pressure to melt the first polymer segment.

4. (Original) The method of claim 1, wherein securing the second polymer segment comprises positioning a heat shrink tube over the second polymer segment and applying sufficient heat and pressure to melt the second polymer segment but not enough heat to melt the first polymer segment.

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5. (Original) The method of claim 4, wherein the first polymer segment has a melting point that is greater than about 400° F and the second polymer segment has a melting point that is less than about 400° F.

6. (Original) The method of claim 4, wherein the second polymer segment has a melting point that is about 350° F.

7. (Original) The method of claim 1, wherein the first polymer segment comprises a polyether-ester elastomer.

8. (Original) The method of claim 1, wherein the second polymer segment comprises a acetal resin/polyurethane blend.

9. (Original) The method of claim 3, wherein the heat shrink tube comprises a perfluoro (ethylene-propylene) copolymer.

10. (Original) The method of claim 4, wherein the heat shrink tube comprises a perfluoro (ethylene-propylene) copolymer.

11. (Original) The method of claim 1, wherein the second polymer segment comprises in combination a proximal segment configured to overlay the braid layer, an intermediate segment configured to overlay the first polymer segment, and a distal segment configured to form a distal tip.

12. (Cancelled)

13. (Original) The method of claim 1, wherein providing the braid layer comprises providing a braid layer that extends sufficiently distally of the cutting position to substantially prevent braid flaring at the cutting position.

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14. (Withdrawn) The method of claim 1, wherein providing the braid layer comprises providing a braid layer that extends distally of the cutting position and wherein providing the braid layer further comprises securing the distal end of the braid layer to substantially prevent braid flaring at the cutting position.

15-34. (Canceled)

35. (Currently Amended) A method of forming a catheter, comprising:

cutting a catheter sub-assembly at a cutting location, the sub-assembly having proximal and distal ends, an inner layer, a reinforcement layer disposed on the inner layer, and a securement layer disposed over at least a portion of the reinforcement layer;

removing the inner layer, the reinforcement layer, and the securement layer distally of the cutting location; and

subsequent to removing the inner layer, the reinforcement layer, and the securement layer distally of the cutting location, securing a polymeric outer segment over at least the securement layer such that a portion of the polymeric outer segment extends distally of the cutting location past the distal end of the cut sub-assembly.

36. (Previously Presented) The method of claim 35, further comprising forming a portion of the polymeric outer segment into a distal tip for the catheter.

37. (Previously Presented) The method of claim 35, further comprising assembling the catheter sub-assembly by:

providing an inner sub-assembly having the reinforcement layer disposed on the inner layer; and

disposing the securement layer on the inner sub-assembly by securing a securement segment thereon.

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38. (Previously Presented) The method of claim 37, wherein:  
the reinforcement layer has a distal end;  
the securement segment has a distal end; and  
the step of disposing the securement layer on the inner sub-assembly is performed such that the distal end of the reinforcement layer extends distally beyond the distal end of the securement segment.

39. (Previously Presented) The method of claim 35, wherein the reinforcement layer comprises a braided member.

40. (New) A method of forming a catheter, comprising:  
providing a braid layer having a distal end and a proximal end;  
positioning an inner lubricious liner within the braid layer;  
securing a first polymer segment over the braid layer, the first polymer segment being positioned proximal of the distal end of the braid layer;  
cutting through the braid layer at a cutting location proximal of the distal end of the braid layer, thereby forming a catheter sub-assembly including the inner lubricious liner, the braid layer, and the first polymer segment, the catheter sub-assembly having a distal end defined at the cutting location; and  
securing a second polymer segment over the catheter sub-assembly, the second polymer segment extending over the first polymer segment of the catheter sub-assembly and extending distally of the distal end of the catheter sub-assembly;  
wherein the step of securing the second polymer segment over the catheter sub-assembly is performed subsequent to the step of cutting through the braid layer.

41. (New) The method of claim 40, wherein the first polymer segment prevents flaring of the braid layer consequent cutting through the braid layer.